NC π^0 Update

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Relative Background Subtraction Issues

- Variations inappropriately applied to signal events in counting number of events passing cuts
  - π absorption errors in OM multisims for effective measurement - Fixed by reweighting effective events according to ratio of total effective distribution to mean total effective distribution over all multisims. Need to adapt OM statistical sims since assumption of Poisson distributed variations is broken by reweighting
  - Cross section errors were also misapplied to signal - Fixed
- Should x-factor correction be varied?
  - Add ability to fix x-factor over sims - Fixed
- Check errors using absolute background subtraction - Done

Flux Errors - Absolute BG vs. Relative BG (x-factor varied)

Normalization error after background subtraction:

	ν		$\bar{\nu}$	
	Abs.	Rel.	Abs.	Rel.
π^- Prod.	0.3%	0.2%	0.7%	1.3%
π^+ Prod.	1.4%	0.2%	9.4%	5.2%
Beam	1.9%	0.1%	4.2%	2.6%

Normalization error on cross section:

	ν		$\bar{\nu}$	
	Abs.	Rel.	Abs.	Rel.
π^- Prod.	0.3%	0.2%	11.4%	11.1%
π^+ Prod.	10.8%	10.5%	9.2%	5.0%
Beam	5.9%	4.0%	6.1%	3.3%

Largest change is in wrong-sign error in $\bar{\nu}$ mode. Other large changes in the error on the the background are diminished bythe error on the integrated flux.